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ABSTRACT

A literature review was conducted to find evidence that bachelor-degree prepared registered nurses (RNs) perform sufficiently better than associate degree or diploma-prepared RNs to justify a change in status proposed by the American Nurses Association. Three computer databases were searched as well as the Cumulative Index of Nursing and Allied Health Literature. The search identified, among other research, three earlier reviews conducted in 1979, 1981, and 1983, respectively. All three reviews reported little evidence of differences in graduates of the three types of programs. Although some studies show differences among graduates in some variables, the current review found no evidence that any type of graduates should be rated better or higher than others. The study also found that the majority of RNs do not support the proposed changes in nurse status. The review concluded that the entry into nursing proposal advanced by the American Nurses Association must be seriously questioned in terms of need, appropriateness, and impact on nurses and on the health care system. (41 references) (KC)

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COMPARING SELECTED CHARACTERISTICS, COMPETENCY, AND PERFORMANCE IN THE CLINICAL SETTING OF ASSOCIATE DEGREE, DIPLOMA, AND BACCALAUREATE PREPARED REGISTERED NURSES: A REVIEW OF RELATED RESEARCH

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INTRODUCTION

Iowa, like all other states, recognizes and licenses two categories of nurses; the Licensed Practical Nurse (LPN), and the Registered Nurse (RN). Licensed practical nurses are prepared in one year programs offered generally in vocational schools, technical institutes, and community colleges. Registered nurses are prepared in three different types of basic nursing education programs; Associate Degree Nursing (ADN), Diploma (Dipl), and Baccalaureate Degree Nursing (BSN). ADN programs are two years in length and offered generally by technical institutes, community colleges, and some four year colleges and universities. Diploma programs are typically three years in length and offered by and based in hospitals; many in cooperation with a college or university. BSN programs are typically four years in length and offered by colleges and universities. Graduates of all three types of basic nursing education programs sit for the same licensure exam upon successful completion of which they are licensed as RN's.

In 1965 the American Nurses Association (ANA) proposed major changes in the structure of nursing and nursing education in the United States. Briefly, that association proposed to move all nursing education into the mainstream of higher education; identifying one level of nursing as professional requiring the baccalaureate degree and another as technical nursing requiring an associate degree. The scopes of practice for the two types of nurses were to be defined at a later date as were the titles for the two levels, or types, of nurses. This proposal hereinafter will be referred to as the "entry into nursing proposal."[1]

Interest in the entry into nursing proposal has varied in intensity since 1965. However, several relatively recent events have resulted in a keen and intense current interest and concern on the part of a number of individuals, groups and organizations. Among these: 1) the titles were, in essence, established by action of the ANA House of Delegates in 1985[2], 2) the National League

for Nursing, previously a supporter of the existing four types of basic nursing education programs (including Licensed Practical Nursing), modified its position generally supporting the BSN for entry into professional nursing[3], 3) the State of North Dakota successfully established the entry into nursing proposal through a simple change in state administrative rules[4], and 4) increasing efforts to introduce legislative measures in a growing number of states. As a result the entry proposal has evolved into a major issue, seriously dividing the nursing profession.

If nursing in Iowa were to be restructured as proposed by ANA, the change could have dramatic impact on hospitals, long-term care facilities, home health care agencies and other sectors of the state's health care delivery system. All would likely experience seriously increased difficulty securing sufficient numbers of nurses prepared to provide the quality nursing care deserved by Iowa's patient-public. Graduates of associate degree and diploma nursing programs, who now practice successfully at the RN level, could be relegated to the level of function now recognized as practical nursing. Licensed practical nurses, as we know them today, apparently would be eliminated. The LPN now serves an important role in Iowa's health care system, particularly in providing nursing care for Iowa's growing geriatric population and rapidly growing home health care system. The RN prepared in a diploma program, like the LPN, would also apparently be eliminated.

Implementation of the entry into nursing proposal could also impact heavily on Iowa's area colleges. The twenty-three (as approved by the Iowa Board of Nursing)[5] practical nurse education programs they currently provide, and one administered by the Des Moines Public School system, would likely be eliminated. Associate degree nursing programs could, in essence, become two year programs that prepare technical nurses who would practice much the same as the current LPN. As a result the opportunity for individuals now entering nursing through

the practical nurse program, as well as those entering registered nursing through the ADN program due to its shorter length (2 years) and geographic availability, would be lost. Likewise the opportunity for nurses to progress from practical to registered nursing would be seriously hampered by loss of the career ladder programs now available in most of the area colleges.

The entry into nursing proposal, if implemented, could ultimately impact in some way the lives and livelihood of many of the more than 35,000[6] nurses currently licensed in Iowa as well as those to be licensed in the future. A public policy decision affecting so many individuals, groups, and the public, would desirably be based on sound planning and supported by research rather than personal feelings, goals or philosophies.

This review of related research was undertaken to identify studies that in one way or another have analyzed the relationship between the type of basic nursing education and the characteristics, competency, or performance of registered nurses. One major goal was to determine whether the body of research related to these questions demonstrates that any one or more of the three types of programs that prepare RN's is or are clearly superior in preparing nurses that are distinctively more competent, perform significantly better, or demonstrate personal characteristics more desirable for registered nursing. The degree to which RN's prepared in the three types of basic nursing education programs are similar or dissimilar, and how they may differ, should provide valuable insight to the desirability or undesirability of the entry into nursing proposal advanced by the ANA.

METHODOLOGY

The intent of this review has been to provide a more readily available base of knowledge useful to those in policy positions who will ultimately make the decisions on how nurses are educated, licensed, and utilized in Iowa. To this

end, several data/information bases were searched including: 1) Educational Research and Information Clearinghouse (ERIC), 2) Medical Literature Analysis and Retrieval Services (MEDLARS), 3) Cumulative Index to Nursing and Allied Health Literature (CINAHL), and 4) Comprehensive Dissertation Index. Research outcomes are included as reported in reports, articles, abstracts or other means.

The primary focus of this review was on studies that compared students in, or graduates of, the three types of basic educational programs which prepare RN's. Of primary interest were studies that compared nursing knowledge, performance in the clinical setting, job satisfaction, leadership ability, cognitive skills, problem solving and critical thinking ability; professionalism; and other similar characteristics.

Books, articles, and other publications that tend to represent philosophy, theory, or personal points of view were intentionally not included in order to present only information that is factual or based on research. Currency was also considered important. Ten years was established as a baseline and studies older than 1977 are not included except as they might be part of one or more previous reviews of the research utilized and referred to in this report.

A variety of methodological approaches have been utilized in studies attempting to determine what differential effect the three types of basic nursing education programs have on the abilities and performance of the registered nurses they prepare. One of the most common is the rating or ranking of a nurse by other nurses. Typically the nurses doing the rating or ranking are supervisors, head nurses, directors of nurses, nurse educators or peers. The rating or ranking is many times based on their perceptions of how an RN or group of RNs perform rather than on more objective measures of job performance. Such measurements of performance, quality of care, or other similar characteristics are complicated to a certain degree by the very existence of the three types of

basic nursing education programs. Each program type apparently has a loyal following of nurses having graduated from that type of program. This appears to be true to the extent that rater bias has been shown to be a problem in studies of this nature if not properly controlled. Several researchers have observed such a bias as will be mentioned later.

Rose (1983) points out that to compare nurses on only one variable also presents problems.[7] While this problem exists in some of the studies reviewed, others addressed several research questions or hypotheses and controlled for a variety of demographic variables to overcome such limitations. Relying on only a few variables to compare nurses prepared in the three programs would appear to become even more questionable in those studies where the rating or evaluating of that variable, or few variables, is based on the opinion of another nurse.

Much of the research that compares nurses from ADN, diploma, and BSN programs tends to measure or compare a variable, or variables, at a point in time. Few studies have collected their data on a longitudinal basis to determine how the relationship between basic nursing education and performance might change over time or with additional experience.

The reader is encouraged to bear in mind these few generalizations as limitations of some of the research reviewed. This review will not attempt a critical analysis of the methodology of each study, but rather has the purpose of accumulating research outcomes to help better understand how the three types of basic nursing education relate to the performance and selected characteristics of the nurses they prepare.

This report will make every effort to view and draw conclusions on the research as a total body of knowledge. The reader is encouraged to form opinions on the same basis and is invited to use the Bibliography to pursue individual reports of further interest.

FINDINGS

The findings of this review will be grouped into the four broad categories of 1) performance, 2) job satisfaction, 3) characteristics, and 4) attitudes of RN's regarding the entry into nursing proposal. Briefly, the performance section will contain those studies that in some way compared the nursing knowledge or clinical competence of students and graduates of the three types of basic nursing education programs. The job satisfaction section contains a group of studies measuring role conflict, role deprivation and other factors that relate to job satisfaction. The characteristics section contains studies that compare various personal and/or demographic characteristics of students and/or nurses prepared in the three types of programs. Finally, the attitude section reports studies that have attempted to determine how RN's themselves, since they are the ones affected, feel about the entry proposal.

PREVIOUS REVIEWS

The search for studies identified three previous reviews (Dennis, Lyman C. II and Janken, Janice K., 1979;[8] McCloskey, Joanne Comi, 1981;[9] and Rose, Mary Ann, 1983[7]) with goals essentially similar to the current review. All three were rather extensive in their efforts and content, but differ somewhat in approach. Rose's review was entirely of research reports or dissertations. The other two included some non-research items. All three are an important part of nursing research knowledge through approximately 1983, and as such, will serve as the basis for this review.

Each subsection of the findings in this paper will begin with a table, or a summary, showing how the previous investigators appear to have interpreted the studies they reviewed, grouped into three categories:

1. Difference (D) - An outcome that shows the BSN student or graduate to be rated or ranked significantly better or

different than the ADN and/or diploma student or graduate in the variable(s) studied.

2. No difference (ND) - An outcome that shows BSN, diploma, and ADN students be rated or ranked essentially similar in the variable(s) studied.
3. Not clear (NC) - An outcome that was considered not clearly enough stated to interpret or an outcome that showed mixed results. Studies are also categorized NC if it appeared that the previous reviewers interpreted the outcome differently.

The table will also, in as much as possible, indicate whether the subject group in the particular study was primarily:

1. nursing students
2. new graduates of nursing programs
3. nurses with nursing experience
4. a combination of the above.

The tables and summaries regarding previous reviewers are provided to give the reader a more complete understanding of the early research related to the entry into nursing issue. This data must be considered very carefully since it is based on a secondary interpretation.

PERFORMANCE

Many investigators have compared how graduates of the three types of basic nursing education programs perform in various clinical settings. Not all compared RN's prepared in all three types of educational programs. Some compared only two, typically ADN and BSN. The general intent, however, appeared to be either; 1) to determine if graduates of any one or more of the three types of programs were clearly better prepared or performed better, or differently, than the others, or 2) the substantiation or demonstration of the existence of a

technical level of nursing practice and a professional level of nursing practice.

The majority of studies in the performance or competency area have asked a third party such as a nursing supervisor, colleague, director of nurses, or nursing educator to rate, rank order or in some similar way assess the expected or demonstrated performance, or competence in the clinical setting, of nurses prepared in the three types of programs. Others have used various testing procedures using standardized or investigator developed tests and instruments. Studies included in this section will be grouped into two categories: 1) those that used some form of rating or ranking procedure, and 2) those that used some form of testing procedure.

Rating or Ranking of Nurses Performance

Table 1 summarizes the outcome of research related to performance as reported by the three previous reviewers. As can be seen, the results are mixed and do not appear to reveal substantial or clear differences between RN's prepared in the three different types of basic nursing education programs. As a matter of fact, more than half of the research would seem to support the contention that graduates of the three programs tend to be quite similar in their knowledge, competency, or demonstrated performance in the clinical setting. See Table 1.

Of the 31 studies reported by Rose, McCloskey, or Dennis and Janken that fit this category, 10 found differences in the performance or competency of students or graduates of the three types of programs that prepare RN's. Thirteen studies concluded little or no difference. Eight were either not clear enough to categorize, had inconsistent outcomes, or were interpreted differently by the reviewers.

Table 1

Studies Using Rating or Ranking Methodologies to Measure RN Performance as Reported by Three Previous Reviewers

Studies Showing Difference			Studies Showing No Difference			Studies Not Clearly Stated or Inconsistent		
Investigator	Subject	Date	Investigator	Subject	Date	Investigator	Subject	Date
Moore, M.A.	2	1967	Moore, A.B.	3	1967	Hausman, et.al.	3	1976
Verhonick, et. al.	4	1968	Highriter	3	1969	Schwirian	3	1977-79
McKenna	3	1971	Smoyak	4	1972	Hallinan	3	1978
Dyer, et. al.	3	1972	Meleis and Farrell	1	1974	Howell	2	1978
Waters, et. al.	3	1972	Welches, et. al.	3	1974	Kramer and Schmalenberg	2	1978
Davis, B.G.	3	1974	Petti	3	1975	Nelson	3	1978
Bullough and Sparks	1	1975	Kuramoto	4	1976	Griffith	3	1980
Hover	3	1975	Reichow and Scott	3	1976	Zarrett	3	1980
Hogstel	3	1977	Chamings and Treevan	3	1979			
Jacobs, et. al.	3	1978	Katzbeck	3	1979			
			Chance	3	1981			
			McFall	3	1982			
			McCloskey	3	1983			
Totals	10			13			8	

1=Nursing Students
2=New Graduates
3=Nurses with Experience
4=Combination

Source: Dennis and Janken, 1979; McCloskey, 1981; Rose 1983.

Several more recent studies which also addressed various perceived, expected, or demonstrated performance or competency variables were located. For this group of studies, the investigator, date, a brief description of the study, and a short summary of the outcome is provided. See Table 2.

Of the eleven more recent studies that fit into this category, four reported differences among students or nurses prepared by the three types of programs. Five researchers concluded little or no difference in their performance or competency. Two had inconsistent or contradictory results.

Table 2

Recent Studies Using Rating or Ranking Methodologies to Measure Nursing Performance

Investigator	Study	Findings	Classification
Stanton, (1982)[10]	Clinical performance evaluation by head nurses of 90 ADN and 143 BSN new graduate nurses in 35 Colorado hospitals within 3-12 months of licensure. Slater Nursing Competencies Rating Scale was utilizied.	New BSN graduates evaluated retrospectively by head nurses displayed greater clinical competency than new ADN graduates.	(D)
Vandeford, (1982)[11]	Nursing supervisor's expectations of level of nursing practice for ADN and BSN graduates were compared to staff nurses self-report of own practice in the same hospital setting using the Level of Functions Tool.	Data analysis showed statistically significant difference in expected level of practice for ADN and BSN graduates.	(D)
Schuyler, (1983)[12]	To examine perceived importance of specific critical requirements expected of beginning nurses prepared in ADN, diploma and BSN programs and to determine their perceived performance ability based on ratings by nursing service supervisors, nurse educators and new graduates.	Based on mean ratings, educators perceived their graduates to be adequately prepared in eight of ten areas studied. Recent graduates perceived themselves as adequately prepared in all ten areas studied. Nursing service supervisors considered ADN graduates not adequately prepared in nine of ten areas, diploma graduates in six of ten areas, and BSN graduates not adequately prepared in two of ten areas.	(NC)
DeBack and Mentkowski, (1986)[13]	A multi-faceted study involving interviews with 83 experienced RNs in both staff and supervisory roles grouped into 1) "outstanding" nurses and 2) "good" nurses. Four instruments including the Job Competence Assessment were used.	Nurses with a baccalaureate degree demonstrated more nursing competencies when compared with their ADN and diploma counterparts.	(D)

Table 2 (con't)

Investigator	Study	Findings	Classification
Scott, (1986)[14]	A questionnaire study of nursing service directors in 252 southern region hospitals to identify their preference in terms of hiring new ADN or BSN graduate nurses.	Nursing service directors preferred BSN graduates and believed BSN should be the preparation for professional nursing. Educational background of nursing service directors, both basic and highest degree held, influenced their preference for graduates.	(D)
Wende, (1984)[15]	A study of the level of competency of BSN and ADN nurses in performing psychomotor skills and to determine if there is a difference between the groups. Expectations of hospital employers, perceptions of senior nursing students, BSN and ADN curriculums were compared.	A lack of congruency between the skills expected by employers and those taught in ADN, BSN programs was observed. Employers expect the same competencies of both ADN and BSN graduates upon entering employment.	(ND)
Sortet, (1985)[16]	A questionnaire study of the incongruence between the perceptions of nursing education administrators and nursing services administrators regarding the educational preparation and employment practices for technical and professional nurses in West Virginia hospitals using an investigator developed questionnaire.	Education administrators more than nursing service administrators believed that BSN nurses should receive higher salaries and promotions to head nurse, etc., preferentially over AD nurses. Nursing education administrators perceive differences in abilities between the two types of nurses more than nursing service administrators do. Revealed incongruence between education and practice. Hospitals do not differentiate between professional and technical practices in salary or job descriptions.	(NC)
Nichols, (1984)[17]	Directors of nursing in 329 hospitals in 13 midwestern states assessed the preparation of new graduates from ADN and BSN programs using Schwirian's Six Dimension Scale of Nursing Performance.	Baccalaureate graduates were rated higher than associate degree graduates on more items of the 6-D scale. A significant interaction between type of RN education of the responding directors and the ratings they gave ADN and BSN graduates was identified on five of the 6 sub-	(ND)

Table 2 (con't)

Investigator	Study	Findings	Classification
		scales. The largest group of the 85 responding directors of nursing indicated the individual graduates and their special characteristics contributed more to difference in practice than the program from which they graduated.	
Hankes, (1986)[18]	A nationwide survey of randomly sampled BSN and ADN schools and hospitals to determine 1) importance of physical assessment in the curricula and to hospitals, and 2) the use of these skills as provided by schools or expected by the hospitals.	Baccalaureate groups attribute greater importance to and provide more practice in each category of physical assessment than did ADN programs. Hospitals contributed lower importance to and expected less practice for each category than did either BSN or ADN programs. All groups regard the eleven categories as desirable to physical assessment.	(ND)
Brief, (1977)[19] for the Iowa Board of Nursing	Multi-faceted study of Iowa registered nurses prepared in ADN, diploma, and BSN programs to compare activities performed, how well the nurse performs, and if type of nursing education influences psychological reaction to job.	ADN, diploma, and BSN nurses performed similar activities in their jobs, performed at similar levels of competency according to employers, and BS degree nurses reacted psychologically somewhat less favorably to their jobs when compared with ADN and diploma graduates.	(ND)
Kane, et al., (1986)[20] for National Council of State Boards of Nursing, Inc.	A descriptive analysis of nursing functions performed by variously prepared nurses. Quality of performance was not measured.	Associate degree, diploma, and BSN graduates displayed essentially the same patterns of work setting across the first 18 months of experience. Basically acute care (mainly med-surgical units and after six months intensive care units). All three types of graduates had essentially the same patterns of frequency, delegation, and criticality for the 222 activities studied.	(ND)
		Totals	4 D 5 ND 2 NC

Combined, 14 studies reported results that would indicate that the baccalaureate nurse performed better or differently than the ADN or diploma prepared nurse. Eighteen studies reported outcomes that failed to identify such differences, or found the performance or competency of nurses prepared in the three types of programs to be substantially similar. Ten studies were either not clear, inconsistent in their results, or interpreted differently by the reviewers.

Tests

Several researchers have utilized various testing procedures including objective and/or essay type tests, both standardized and investigator developed, to determine what effect type of basic nursing education has on the competency or performance of ADN, diploma and BSN prepared nurses. This group of studies addressed, among other variables, cognitive knowledge and how nurses prepared in the three types of basic nursing education programs would address certain patient care situations.

Table 3 summarizes how the three previous reviewers appear to have viewed this group of studies.

Four of the studies in this group reported differences that would indicate the baccalaureate prepared nurse performed better, or differently than the ADN or diploma prepared RN. Four did not identify such a difference or in essence, found the graduates of the three types of basic nursing education programs to be substantially similar.

Two later studies using pen and paper testing methodologies also report findings that tend to be somewhat contradictory. Sharard, in a 1983 study administered a paper and pencil test tied to NLN statements of ADN and BSN nursing practice to 54 ADN and 34 BSN students at Indiana State University to determine if the two groups would perform differently in certain situations. The study was a replication of the Gray, et al., (1977) study. Sharard found stat-

Table 3

Studies Using Test Based Methodology to Measure
RN Performance as Reported by Three Previous Reviewers

Studies Showing Difference			Studies Showing No Difference			Studies Not Clearly Stated or Inconsistent		
Investigator	Subject	Date	Investigator	Subject	Date	Investigator	Subject	Date
Verhonick, et. al.	3	1968	Meleis and Farrell	1	1974			
Mandrillo	2	1969	Fredrickson and Mayer	2	1975			
Davis	3	1974	Bassett	1	1976			
Gray, et. al.	2	1977	McQuaid and Kane	2	1979			
Totals	4			4			0	

1=Nursing Students
2=New Graduates
3=Nurses with Experience
4=Combination

Source: Dennis and Janken, 1979; McCloskey, 1981; Rose 1983.

istically significant differences between ADN, diploma and BSN prepared nurses in 10 nursing behaviors in seven functional nursing areas. No significant differences were demonstrated in four nursing behaviors in two functional areas. While the ADN and BSN student responses did tend to reflect their respective NLN nursing practice statement, there was no statistically significant difference between the graduates of the three types of programs for 29 of the 43 behaviors studied.[21]

Giger, in 1986, used an essay test methodology to study 343 ADN and BSN graduates to determine if a relationship existed between type of basic nursing education and the conceptual and theoretical approaches to patient care demonstrated by the graduates. She found a statistically significant relationship between type of basic nursing education and the way the nurse makes a nursing diagnosis, implements the nursing process, and evaluates the effect of nursing

interventions.[22]

Combined with the studies reported in Table 3, a total of five found significant differences while five did not.

JOB SATISFACTION-ROLE CONFLICT, ROLE AMBIQUITY

Closely related to job performance, with implications for productivity, longevity and quality of work is a group of studies that have examined job satisfaction, role conflict and role ambiguity of RN's prepared in the three types of basic nursing education programs. Table 4 summarizes how the three previous reviewers appear to have interpreted the earlier studies in this area.

Table 4

Studies Measuring Job Satisfaction of RN's Prepared in ADN, Diploma, BSN Programs as Reported by Three Previous Reviewers

			McCloskey			Rose			Dennis and Janken			Summary		
Investigator		Subject Group	D	ND	NC	D	ND	NC	D	ND	NC	D	ND	NC
Goff	1973	3								x			x	
Boyd	1975	3								x			x	
McCloskey	1976	3								x			x	
Roehm	1966	3					x						x	
Hover	1975	3					x						x	
DiMarco et. al.	1978	3					x						x	
Fogarty	1980	3					x						x	
Morris	1983	3					x						x	
Stein	1980	3					x						x	
Hurka	1970	3					x						x	
											Totals	0	10	0

1=Nursing Students
2=New Graduates
3=Nurses with Experience
4=Combination

Source: Dennis and Janken, 1979; McCloskey, 1981; Rose, 1983.

All ten of the studies reported by the previous reviewers in the job satisfaction grouping reportedly found no significant relationship between type of basic RN preparation and the RN's level of job satisfaction.

Four more recent research efforts have also attempted to determine whether or not type of basic nursing education affects the level of job satisfaction of RN's. A brief description of these studies and their findings is provided in Table 5.

In this more recent group of studies related to job satisfaction, three reported no difference in the way students or graduates of the three types of programs responded to their jobs or roles. One of these found baccalaureate nursing students had greater role deprivation than the ADN students. The fourth found that baccalaureate nursing students have greater role conflict than ADN or diploma prepared nurses.

CHARACTERISTICS

Professionalism

One likely would assume that nurses with a baccalaureate degree would demonstrate a higher level of professional orientation than nurses prepared in diploma and/or ADN programs. Several researchers have attempted to determine whether such a relationship, in fact, exists between type of basic nursing education and the professional orientation or characteristics of RN's.

Rose reports six studies (Richards, 1972; Lawler and Rose, 1985; Jones and Jones, 1977; Davis, 1972; Murray and Morris, 1982; Nored, 1982) that compared the professional orientations of RN's prepared in the three types of programs. Five of the six reported baccalaureate prepared RN's to have greater professional orientation than their ADN or diploma counterparts.[7]

Dennis and Janken reported one additional study in this area. Hurka (1971) found no difference in the professional orientation of the variously prepared RN's.[8]

Table 5

Recent Studies Comparing Job Satisfaction Level of Nurses Prepared in ADN, Diploma, BSN Programs

Investigator	Subject Group	Study	Findings	Classification
Brief, 1977[19] For Iowa Board of Nursing	(3)	Six integrated studies of a sample of 210 Iowa registered nurses stratified with 1/3 BSN, 1/3 diploma, and 1/3 ADN. Studied relationship of basic education to what RN's from the three types of programs do, how well they perform and their psychological reaction to their job.	Brief concluded that diploma, ADN, and BSN programs prepared RN's that: 1. perform similar nursing activities as RN's; 2. performed at similar levels of competency; and 3. BSN prepared nurses react somewhat less favorably to their jobs than do their ADN and diploma counterparts.	(ND)
Carroll, 1982[23]	(1)	A comparison of 82 second year ADN and 68 senior BSN students to determine whether there was a difference between self-esteem and role deprivation.	No significant differences between ADN students and the BSN students were found on the self-esteem-role deprivation comparison. There was no difference in the self-esteem among the three groups. Baccalaureate nurses had greater role deprivation than ADN nurses. A difference in role deprivation also existed between the two associate degree groups.	(ND)
Stewart, 1982[24]	(2)	A study of RN's who graduated from three types of basic nursing education programs (ADN, diploma, BSN) during the twelve months prior to the study.	Differences were found to exist by program type on the dependent satisfaction variables measured, however, type of basic nursing education does not appear to have a predominant influence on the nurses level of job satisfaction.	(ND)
Bradford, 1986[25]	(1)	224 BSN, 67 ADN, and 25 diploma students were surveyed at a national student nurses convention to determine whether role conflict or role ambiguity varied by type of nursing education program.	Baccalaureate nursing students were significantly lower in terms of role ambiguity than ADN or diploma nursing students. However, baccalaureate students were significantly higher in terms of role conflict than the ADN and diploma students. Age had a signifi-	(NC)

Table 5 (con't)

Investigator	Subject Group	Study	Findings	Classification
			cant relationship to role ambiguity but not to role conflict. Sex, year in school, prior experience and number of role models were not found to be significant variables.	
			Totals	0 D 3 ND 1 NC

Combined, six of these studies indicate that the baccalaureate nurse has a greater professional orientation than the ADN or diploma prepared RN. Two studies found no difference.

According to Dennis and Janken, Kramer in 1974, noted an interesting related finding that a high professional role orientation can be distressing in some instances, and add to role conflict. This evidently is even more true when a nurse with a high professional orientation is employed in an organization, such as a hospital, where a degree of bureaucracy is experienced.[8] Dennis and Janken also reported that Kramer and Baker, 1971, observed that the highest drop-out rate from nursing is among nurses with a high professional role orientation, particularly when they are employed in highly structured institutions and not able to perform in accordance with their own expectations and standards.[8]

Three more recent studies comparing professional role orientation among RN's prepared in the three types of basic nursing education programs were located. A brief summary of the studies and outcomes are provided in Table 6.

Altogether it appears that six researchers studying professional characteristics found a difference that would favor the baccalaureate RN as having at least some level of greater professional orientation than ADN or diploma RN's. Four studies found no difference in professional orientation. One was inconsistent in its findings.

Leadership

Another characteristic that has drawn the attention of several researchers is whether a difference exists in leadership orientation or ability of graduates of the three types of RN programs. See Table 7 for a summary of how the previous reviewers apparently interpreted this group of studies.

Table 6

Recent Studies Comparing Professional Characteristics of Nurses Prepared in ADN, Diploma and BSN Programs

Investigator	Subject Group	Study	Findings	Classification
Simons, 1982[26]	(3)	Two hundred RN's in a large regional teaching hospital in South Carolina were studied to determine if a relationship exists between education, work experience, or position of employment, and professional orientation.	Overall, managers and staff nurses alike exhibit a high level of professionalism. BSN graduates differ from ADN graduates perceiving themselves to be more service oriented. Diploma graduates are different from both BSN and ADN, perceiving themselves with a greater sense of calling. Managers tended to display more professional characteristics than staff nurses.	(NC)
McFall, 1982[27]	(3)	A representative sample of RN's in metropolitan Atlanta, Georgia were studied to determine if a relationship between type of basic nursing education and the professional orientation of nurses existed.	Nurses with more formal training are not more professionally oriented, do not have better job skills, and do not perform better. Non-college nursing graduates compare equally with college nursing graduates when they work in the hospital setting.	(ND)
Cook, 1985[28]	(2)	A questionnaire study of 276 recent nursing graduates from 11 programs of nursing (ADN, diploma, BSN) in the state of Michigan to measure differences in perceptions of professionalism in nursing practice.	Graduates of all three programs perceived the 11 professional characteristics important and maintain a high image of professional nursing. Research orientation received the lowest recognition by all graduates. All graduates perceive their own professionalism as greater than their peers. Study data suggest that curriculum of all three programs are possibly quite similar in introducing students to certain professional behaviors.	(ND)

Table 7

Studies that Compare Leadership Characteristics of Nurses Prepared in ADN, Diploma, and BSN Programs as Reported by Three Previous Reviewers

			McCloskey			Rose			Dennis and Janken			Summary		
Investigator		Subject Group	D	ND	NC	D	ND	NC	D	ND	NC	D	ND	NC
Moore	1967	Fac.	x									x		
Richards	1972	1					x[1]			x			x	
Meleis and Farrell	1974	1					x[1]						x	
Howell	1978	2									x			x
Jacobs et. al	1978	2	x									x		
Goldstein	1980	1					x[1]						x	
Moore, L.	1985	1					x[1]						x	
McMillan	1985	2					x[1]						x	
											Totals	2	5	1

1-Nursing Students
2-New Graduates
3-Nurses with Experience
4-Combination

Source: Dennis and Janken, 1979; McCloskey, 1981; Rose 1983.

1 Note: Rose mentioned 14 studies that in some way compared leadership characteristics of RN's prepared in the three different basic nursing education programs, but only identified these five that found no difference in leadership ability among ADN, diploma, and BSN prepared RN's. Totally, she indicated only shaky evidence exists to indicate baccalaureate nurses have greater leadership abilities.[7]

According to Rose, eight studies (Moore, 1967; Forest, 1968; Chicatrello, 1974; Hogstel, 1977; Knopf, 1977; Soules, 1978; Ruggles, 1981; Shank and Stollenworth, 1988) demonstrated that ADN nurses do go into nursing leadership positions. The Knopf study found that 10 years after graduation 19% of ADN nurses

were head nurses and 8% were supervisors. In addition a study by DiMarco and Hilliard, 1978 found no difference in leadership competency between baccalaureate and technical (ADN and diploma) nurses.[7]

Two more recent studies comparing leadership characteristics of RN's were located. Both dissertations, completed in 1985, are summarized in Table 8.

Altogether, the earlier studies combined with the two more recent studies that addressed the comparative leadership ability indicate that seven found no differences among ADN, diploma, or BSN RN's. Eight indicated that ADN RN's do go into leadership positions. One study was not clear.

Personality-Intelligence

Rose reviewed seven studies (Richards, 1972; Ventura, 1976; Patch, 1981; Meleis and Farrell, 1974; Carroll, 1982; Meleis and Dagenais, 1981; Martin, 1978) that compared personality factors of students in or graduates of the three types of basic nursing education programs. In five of the seven studies, no differences were found. The remaining two were inconsistent or contradictory in their findings.[7]

Four studies reviewed by Rose (Mandrillo, 1969; Richards, 1972; Meleis and Farrell, 1974; Sparks, 1979) addressed the intelligence of students in the different types of basic nursing education programs. Three of the four found no difference in level of intelligence.[7]

Apparently, Dennis and Janken reported only one study (Richards, 1972) that compared intelligence or personality characteristics of ADN, diploma, and BSN graduates. Richards found no statistically significant difference among nurses from the three types of programs in either their intelligence or personality characteristics.[8]

More recently, Patty L.M. Orr in her 1986 dissertation, compared the empathy levels of graduating associate degree and baccalaureate degree nursing

Table 8

Recent Studies Comparing Leadership Characteristics of
RN's Prepared in ADN, Diploma or BSN Programs

Investigator	Subject Group	Study	Findings	Classification
Moore, 1985[29]	(1)	Studied maturity levels and potential leadership effectiveness of students in 12 of the 19 NLN accredited BSN and ADN schools in Virginia.	BSN students scored higher in potential leadership effectiveness. There also was a statistically significant relationship between potential leadership ability and leadership experience. A low positive correlation between maturity and leadership effectiveness was noted. Age and amount of education were not statistically significant predictors of leadership effectiveness.	(D)
Dietz, 1985[30]	(4)	Compared the perceptions of leadership of 164 ADN and 143 BSN students and 20 ADN and 21 BSN faculty members from four ADN programs and three BSN programs.	All data indicated no differences in perceptions of leadership ability of student and faculty based on the type of nursing education program. All participants were homogeneous in their perceptions of leadership behavior.	(ND)
			Totals	1 D 1 ND 0 NC

students using the Empathy Construct Rating Scale. One-hundred-twenty-one graduating students from three ADN and 116 graduating students from five BSN programs participated in the study. All were NLN accredited programs. Graduates of both types of basic nursing education programs were found to possess relatively high levels of empathy. However, ADN students scored significantly higher than the baccalaureate degree nursing students.[31]

Decision-Making and Problem-Solving Skills

Several studies have compared students and or graduates of ADN, diploma, and BSN nursing programs in an effort to determine whether one or more types of program demonstrates a distinct advantage over the other(s) in preparing graduates in decision-making and problem-solving skills. Table 9 summarizes how the three previous reviewers appear to have interpreted this group of studies.

Table 9

Studies Comparing Decision Making and Problem Solving Skills as Reported by Three Previous Reviewers

Studies Showing Difference			Studies Showing No Difference			Studies Not Clearly Stated or Inconsistent		
Investigator	Subject	Date	Investigator	Subject	Date	Investigator	Subject	Date
Mandrillo	2	1970	Bassett	1	1976	Johnston	?	1982
Gray et. al	2	1977	Fredrickson and Mayer	2	1975	Waters, et. al.	3	1972
Jacobs	?	1980	Kuramoto	?	1975			
Totals		3			3			2

1=Nursing Students
2=New Graduates
3=Nurses with Experience
4=Combination

Source: Dennis and Jankin, 1979; McCloskey, 1981; Rose, 1983.

Five additional more recent studies analyzing whether RN's prepared in ADN, diploma, or BSN programs differ in their decision making or problem solving skills. This group of studies is summarized in Table 10.

The research comparing cognitive skills and decision making of the variously prepared RN's is essentially split in terms of outcome. Totally, five studies showed a difference and five studies reported no difference. Three were either inconsistent or contradictory. For example Karns, 1985 found no difference in proficiency in problem solving between ADN and BSN graduates but found BSN graduates more efficient in the problem solving/decision making process.

ATTITUDES OF CURRENT REGISTERED NURSES

For a change in public policy that may potentially effect the professional lives of so many, few researchers have endeavored to determine how those most affected, the currently licensed nurse, feel about the entry into nursing proposal. The three previous reviewers did not address this question. This would seem to be an oversight. Recognizing the importance of attempting, through research, to determine whether major differences in the performance of graduates of the three types of nursing programs exist, it seems equally as important to determine 1) the attitudes of the groups affected, and 2) whether they consider the entry proposal to be a valid step in improving nursing care.

RN magazine apparently recognized this information gap and included in their June 1978 issue a questionnaire returned by some 10,000+ nurses. Tabulation of the responses revealed that 72.7% of the 10,117 nurse respondents opposed the entry into nursing proposal, while 26.1% favored it. One and two-tenths percent did not provide an answer. When only the responses of those 2,964 respondents who were members of the association proposing the change (ANA) were considered, still a majority (60.7%) were opposed to the professional/technical division that would be brought about by adoption of the entry into nursing proposal. When only non-ANA members were considered, 77.7%

Table 10

Recent Studies Comparing Decision Making and Problem-Solving Skills of ADN, Diploma, and BSN Prepared Nurses

Investigator	Subject Group	Study	Findings	Classification
White, 1978[32]	(1)	Perceptions of the faculty of ADN and BSN programs to identify possible differences in cognitive behavior and decision-making skills in graduating nursing students in two year and four year programs.	Faculty of BSN programs expressed greater expectations of their graduates than faculty of ADN programs. However, BSN faculty tended to underestimate expected behaviors for the two year ADN student while ADN faculty tended to over estimate expectations of BSN graduates.	(D)
Sides, 1984[33]	(1)	A study to determine if differences exist in cognitive skill development of graduate nurses from BSN, ADN, and Diploma nursing education programs. Sample consisted of 268 ADN, 205 diploma and 170 BSN students.	Program differences existed in total test performance. Diploma graduates performed best. No differences were found in higher mental process skills for graduates of the different programs. Aptitude was a good predictor of higher mental processes with strongest influence in BSN education. Age was not a factor.	(ND)
Anderson, 1984[34]	(2)	A descriptive study of perceptions of decision-making of beginning registered nurses from diploma, ADN, and BSN programs during application of the nursing process on medical and surgical units in a hospital setting.	ADN, Diploma, and BSN graduates differed in their decision-making process with BSN's selecting a greater number of complex decisions.	(D)
Jones, 1984[35]	(1)	Studied 49 ADN and 33 BSN degree students graduating from schools located in the Southeast to determine whether or not there was a difference in critical thinking ability among the graduates of the two programs.	Graduating ADN and BSN students did not differ significantly in terms of critical thinking ability. Critical thinking ability did not differ significantly among age groups. Baccalaureate curricular practices did not appear to	(ND)

Table 10 (con't)

Subject Investigator	Group	Study	Findings	Classification
			significantly enhance the critical thinking ability of the graduates, although a slight gain in main scores for the BSN group were detected.	
Karns, 1985[36]	(4)	A study of ADN and BSN prepared nurses working in selected Wyoming hospitals to determine if a difference in problem-solving skills or ability existed among the two types of graduates.	No significant difference was detected on the proficiency scale. There were significant differences on the efficiency scale. Little use was made of nursing diagnoses by the subjects. Critical cues were used in formulation of diagnostic possibilities.	(NC)
			Totals	2 D 2 ND 1 NC

opposed the proposal, while 21.3% favored them.

The data were further analyzed to determine the attitudes of head nurses and nurse supervisors. Of the 2,026 nurses in this category 78% opposed implementation. Among staff nurses, 74.5% were opposed while 24.6% were in favor. The proportions for nurse educators who responded to the poll were somewhat different. While still not a majority, a greater proportion favored the entry into nursing proposals. Of the 839 nurse educators who responded, 52.7% were opposed while 45.5% were in favor. The only group found to favor the entry into nursing proposal was the 1,342 BSN's who responded. Of this group 71.2% were in favor and 27.1% opposed the proposal. Age did not seem to affect attitudes.[37]

When published, the findings of this poll received substantial criticism related basically to its methodology. The questionnaire was simply included in an issue of RN magazine. Although the number of responses was extremely large, many expressed concern that its methodology was not scientific and therefore the results could not be considered representative of the larger population of registered nurses in the United States.

In an apparent effort to counter such criticism, RN repeated the poll by sending questionnaires to 5,000 randomly selected subscribers and 10,000 non-subscribing RN's. A total of 3,781 returns were received. Responses included 48% of the subscribers and 14% of the non-subscribers. The new poll was published in the May 1, 1980 issue of RN. The responses were statistically determined to be reliable to plus or minus two percent at the ninety-nine percent confidence level. Findings of this more controlled survey were very similar to those of the previous RN poll. However, among subscribers the proportion who were opposed to the entry issue had grown to 80%. Overall, when asked "Should a BSN be mandatory for entry into practice from 1985 onwards?," 78% of all respondents responded no. Twenty-two percent were in favor. When the question "Should Diploma and ADN graduates be termed technical nurses?" was considered,

85% of the respondents were negative and only 15% in favor. When the question "Should all presently licensed RN's be granted professional nurse status?" was asked, 93% responded affirmatively while 7% indicated no.[38] The RN surveys appear to be the first major attempt, at least nationally, to determine how affected nurses feel about provisions contained in the entry proposal. Since then other researchers are apparently recognizing the importance of this question. Two more recent studies (Schoen, 1982 and Bonny, 1984) report findings that parallel very closely those of the national efforts of RN magazine.

Schoen in a 1984 survey of 323 registered nurses randomly selected from all RN's licensed in the state of Illinois, found that of those surveyed, 84% opposed requiring a BSN for entry into professional practice and 72% opposed the BSN requirement for promotion to supervisory positions. Multiple regression analysis of the data showed that having a baccalaureate degree and being a member of a professional nursing organization were positively related to support for the entry into nursing proposal. Having a baccalaureate degree and intending to work in the future were positively related to support for a BSN promotion requirement. Schoen states in her conclusions "Nursing leaders would be well advised to note three important facts." First, "The BSN requirement for entry into practice is a divisive issue that does not even command the support of the majority of the BSN prepared nurses." Second, "The 1985 resolution comes at a time when there is a cutback in funds for nursing education and a greater concern about a shortage of available nurses." Third, "While the BSN is an important step it will not, in and of itself, bring nursing to a full professional status." "That goal also requires a clear conceptualization of the discipline of nursing and a commitment by nurses to a full-time professional career."[39]

Bonny (1984) studied the attitudes of currently licensed registered nurses in Arizona. A mail questionnaire was sent to 400 registered nurses, randomly selected from the 28,625 registered nurses on the licensure roll of the Arizona

State Board of Nursing in October 1983. More than 70% (286) responded. Approximately 75% of the respondents were opposed to requiring a different examination for baccalaureate graduates which would result in two separate licenses to practice, one for the BSN and one for Diploma or ADN graduates. The respondents were even more in opposition in terms of their intensity when asked if the BSN degree should be required for RN licensure. Nearly three-fourths of the respondents indicated that the Diploma or ADN degree should be the minimum educational preparation for the practice of professional nursing. Less than one-fourth favored the BSN degree. When analyzed on the basis of initial nursing preparation, 44% of those respondents with baccalaureate degrees favored the BSN entry requirement while only 15% of the ADN and 13% of the Diploma prepared nurses were in favor. One-third of those respondents who were members of ANA or the National League for Nursing were in favor of the entry issue proposals. Nearly two-thirds of the respondents agreed with providing certification or some type of credential, other than licensure, for those who complete a BSN. Over 97% of the respondents supported the concept of career mobility through the provision of BSN programs designed for RN's who want to pursue a BSN degree.[40] These two more recent studies, localized to the states of Arizona and Illinois seem to lend significant support to the findings of the RN surveys of broader national samples. All tend to show that licensed registered nurses, as a group, by far are not in favor of the entry into nursing proposal.

SUMMARY

The purpose of this review has been to provide a current summary of research findings related to the entry into nursing proposal advanced by the American Nurses Association. Briefly, this proposal separates the RN prepared in a baccalaureate degree program from those RN's prepared in ADN or diploma programs and gives them the new title of Professorial Nurse. Those RN's cur-

rently prepared in ADN and diploma programs, though they now have identical state licensure status as the BSN prepared RN, would be re-titled Associate Nurse. They would likely function at the technical level as assistant to the "professional" nurse. The validity, even the desirability, of such a change seems to lie, at least in part, in if and how RN's prepared in the three types of basic nursing education programs are similar or dissimilar in their performance as nurses. Is there in fact evidence that the BSN prepared RN performs sufficiently better or different than the ADN or diploma RN to justify such a change? This review is seen as an important step in providing this kind of knowledge to those faced with making public policy decisions related to the entry proposal.

Three computer data bases were searched as well as the Cumulative Index of Nursing and Allied Health Literature. This search identified, among other efforts, three similar reviews completed previously by four respected nurse educators and/or researchers (Dennis and Janken, 1979; McCloskey, 1980; Rose, 1983) during the period from approximately 1979 to 1983. The three previous reviews include research related to this topic and other conceptual or theoretical writings dating back as far as the Goldmark report of 1923.

Their purpose seems to have been based legitimately on a desire to determine the existence or lack of existence, of scientific evidence which in fact clearly defined a significant difference in the performance or individual characteristics of registered nurses prepared in the three types of basic nursing education programs. Whether or not a technical and a professional level of nursing actually exists in the practice setting seems to have also been a goal.

After rather extensive reviews, all three reported that the body of research available at their respective times failed to definitively establish clear cut differences in the graduates of the three types of programs. The current review builds on this already reported, rather extensive base of knowledge.

A variety of performance variables were investigated by the many studies reviewed including the comparative use of nursing assessment, perceptions and expectations of clinical competence, proficiency and efficiency in performing certain nursing functions, patient relationships, measures of patient progress, and others. As a result of their review, Dennis and Janken stated "The direction that nursing is taking raises the question of the effects of different educational programs on nursing performance. A number of studies have attempted to answer this question...the results of these studies have been inconsistent."[8] McCloskey, in her review determined, "From the studies in this review, the author could not conclude that there was any difference in skill or practice among nurses with different educational backgrounds. The investigator also failed to designate the skills needed to improve patient outcomes and to make the nurse and her health care group more effective."[9] Rose, after her review concluded "One could argue that, since the studies do not point to a clear cut superiority of BSN over ADN graduates, both will continue to find a place in the job market. More strikingly, however, is the superiority of the diploma nurse."[7]

The more recent studies identified in this review share essentially the same findings as those of the three earlier reviews. Selectively one can identify studies that reveal statistically significant differences among graduates of the three types of basic nursing education programs in certain variables. In some the difference, while statistically significant, may not be large in terms of impact or importance. In other studies no difference is found or the diploma and/or ADN graduate appears to be rated better or higher than BSN graduates. When taken as a whole, however, the research found in the current review reveals essentially the same outcomes as the three previous reviews:

1. No clear cut significant difference in the performance or characteristics of graduates prepared in the three types of programs is substanti-

ated.

2. At least as many studies found no difference among graduates of the three types of programs as those that did.

One point is relatively important in understanding the research, particularly in regards to measures of performance. All three previous reviewers made reference to an observation noted in several studies. Several investigators noted a significant correlation between the basic nursing education of various raters, such as directors of nursing and nursing education administrators, and the ratings they gave nurses from the three kinds of basic nursing education programs. There appears to be an observable bias where one nurse rating another gives a higher rating to subjects having the same type of basic nursing education they possess. Scott, 1986; Griffith, 1980; Dyer, 1972; Howell, 1978; and Nicholls, 1984 are all investigators who, among others, have observed such a relationship and commented on its potential impact on the validity of their research findings. Nicholls, in his 1984 study of ADN and BSN graduates in 13 midwestern states cautions that his study and others that rely on ratings by directors of nursing may be seriously flawed because of this apparent bias.[17] This limitation was also recognized by McCloskey. "Performance studies using ratings by directors of nursing have the same problems as the competence studies using ratings by educators. Instead of asking directors for direct observations and ratings of particular individuals, and then compiling group results, most researchers chose to depend upon the directors perceptions of a group of people with a particular background. The response of the directors and educators may be biased by their own educational background and the type of nurses they encounter."[9]

An interesting finding reported by several researchers (Howell, 1978; Petti, 1975; Zarrett, 1980; Davis, 1973; Bulloch and Sparks, 1975; Nelson, 1978; Sides, 1984; and others) was that RN's who graduated from a diploma program were

rated highest on several performance variables. This fact was pointed out by both McCloskey and Rose. Rose commented "If the diploma graduate can offer significant cost savings to the hospital, then the higher rating earned by nurses with this type of preparation may enhance the competitive stance of these programs compared to BSN and ADN programs."[7]

A third observation of particular interest also made by several researchers studying the relationship between basic nursing education and performance in the clinical setting was an obvious discrepancy in responses of nursing educators, and nurses and administrators in the clinical setting. Educators had a tendency toward indicating higher expectations than did directors of nursing in the acute care setting. For example, Sortet (1984) reported that more nursing education administrators believe that BSN nurses should receive higher salaries and promotions preferentially over ADN nurses than do nursing service administrators.[16] Schuyler (1973) indicated "The study suggests the need for expanded collaboration between nursing service personnel and nurse educators."[12]

Several studies have attempted to determine if differences exist in the level of job satisfaction among graduates of the three types of basic nursing education programs. Thirteen of the 14 studies in this area report essentially similar levels of job satisfaction for RN's from the three types of basic nursing education programs. There may be somewhat lower levels of job satisfaction and higher levels of role conflict on the parts of BSN graduates according to some researchers (Brief, 1977; Carroll, 1982; Bradford; 1986, etc.). One study (Stein, 1980) found the BSN graduates level of job satisfaction drops while the ADN graduates level remains high.[7]

When compared on the basis of professional characteristics, nurses prepared in the three different types of basic nursing education programs again appear to be very similar. There is some evidence that BSN graduates do score higher on certain measures of professionalism though these findings appear to be shaky.

Others, such as McFall, 1982, found that "Nurses with more formal training are not more professionally oriented, do not have better job skills, and do not perform better."[27] Some evidence exists (Kramer and Baker, 1971) that the dropout rate from nursing is greatest among those nurses with the highest professional role orientation.[8]

Rose and Lawler, in a recent study, found that the nurse displaying the greatest amount of professional characteristics was the ADN graduate who had returned to complete her baccalaureate degree.[41] Cook (1985) concludes that the data suggest the curriculum of all three types of programs are possibly quite similar in introducing students to certain professional behaviors.[28]

Leadership characteristics of registered nurses prepared in the three types of basic nursing education programs has also drawn the attention of several researchers. Here again, as with previously reported research, there is at best only shaky support for the BSN graduate having greater leadership characteristics when compared to graduates of ADN and diploma programs. Most studies reported by previous reviewers, and in the current review, found little if any difference. Moore (1985), while finding higher scores for BSN graduates indicated "Age and amount of education were not statistically significant predictors of leadership effectiveness."[29] Dietz (1985), in her study of leadership perceptions found "All data indicate no differences in perceptions of students and faculty. All participants were homogeneous in their perceptions of leadership behaviors."[30]

The research relating to personality and intelligence characteristics of registered nurses prepared in the three different types of basic nursing education appears to show that more studies found a lack of difference, rather than a difference, in these characteristics. Very similar findings are revealed in the research relating to the cognitive ability, critical thinking ability, and problem solving ability of RN's. Anderson (1984) found that BSN graduates selected

a greater number of complex nursing situations than ADN or Diploma graduates.[34] Jones (1984) found no difference in critical thinking ability and suggests "baccalaureate degree curricular practices did not appear to significantly enhance the critical thinking ability of its graduates."[35] Karns (1985) suggests that BSN graduates are more efficient, but not more proficient, in solving problems.[36]

While not addressed by any of the three previous reviewers, the attitude of currently registered nurses was considered an important part of this review since so many could be affected by the entry into nursing proposal. Two major national assessments and two more localized state assessments were located. All reveal essentially the same findings. By far a majority of registered nurses do not support the changes proposed in the entry into nursing proposal. This is true for approximately 75 percent of current registered nurses. The only group of nurses to show any substantial support for the proposal, still less than a majority, is that group of RN's who were prepared in BSN programs. Nursing educators are also more likely than others to support the entry proposal.

DISCUSSION

If one attempts objectively to analyze the body of research comparing students and graduates of ADN, Diploma, and BSN education programs on the basis of innumerable performance and characteristic variables it becomes evident that few major differences are in fact substantiated. It also appears that the functions of the registered nurse, at least as practiced in most clinical settings, cannot easily be differentiated into technical and professional levels, or categories, particularly if the differential is based on whether the nurse was prepared in a BSN, a Diploma, or an ADN program. Based on these observations, the entry into nursing proposal advanced by the American Nurses Association must be seriously questioned in terms of need, appropriateness, and the impact implementation

might truly have on nurses and the health care delivery system.

Another way to view the outcome of the four reviews is that all three basic nursing education programs appear to do quite well preparing entry level registered nurses who perform similarly in most clinical settings, exhibit essentially similar personal and intellectual characteristics, and demonstrate similar leadership and professional qualities. Viewing the research in this way begins to bring into focus some possible reasons why the entry into nursing proposal has become such a divisive issue in the nursing profession, literally dividing nurses, LPN's and RN's alike into supporting and non-supporting factions.

Educators and graduates from each of the three types of basic nursing programs feel strongly that their program, whether ADN, Diploma, or BSN, has or does prepare them well for careers as registered nurses. Their views appear to be very strong and the research seems to support their views. As a result, the entry into nursing proposal advanced by a minority of registered nurses, suggesting that graduates of two of the three programs are no longer capable of functioning at the same level as graduates of the third, or can no longer be considered professional, has created extensive disagreement and strong feelings. This problem may never be resolved unless a way is found for members of the profession to work together toward a common resolution that not only improves the image of nursing, but also assures improved nursing care for the public.

The body of research as a whole perhaps is beginning to provide new direction which if recognized could enhance the possibility of resolution. In addition to the research failing to substantiate significant differences in the graduates of the three different types of programs, some studies are beginning to support a concept around which all members of the nursing profession could rally and work together cooperatively toward resolution of the entry issue. Several studies tend to point toward the desirability of well articulated career

mobility programs in nursing.

According to the profile which emerged from the data generated by McCloskey's research, the "desirable" nurse was one that had completed an ADN or diploma program and then returned to earn a baccalaureate degree. In this study, the nurse who had first earned an associate degree or diploma in nursing and then moved up the educational ladder to achieve a BSN received a mean job effectiveness score of 16.4 (on a 20 point scale) compared to 13.3 for the generic BSN, 14.6 for the ADN, and 14.2 for the diploma graduate.[42]

Later, Rose and Lawler found that the nurse displaying the greatest professional orientation was the nurse who had completed an ADN program and then returned to complete a BSN degree. On the basis of this finding the investigators conclude that the ADN nurse who seeks further education in nursing may be a ready market for enrollment in a BSN program. They also warn however, that this nurse-student differs from the generic BSN student and appropriate accommodations in the curriculum should be considered.[41]

This observation was expanded upon when Hunter studied RN's who had graduated from an ADN program upon entering and exiting a baccalaureate degree completion (2+2) program. This ADN-BSN graduate not only achieved a high level of professionalism, but maintained a high level of orientation to bureaucracy. The investigator suggests the dual role orientation of high professional-high bureaucratic scores in her study may suggest greater compatibility of the 2+2 graduate with the acute care setting than those nurses without such dual role orientation.[43]

These findings, combined with the fact that the research fails to substantiate significant differences in the graduates of the three types of basic nursing education programs, should be taken seriously. As a result, through research and cooperative planning, an entirely new approach to resolving the entry into nursing dilemma might be pursued.

Empirical evidence exists that, in most settings, registered nurses prepared in all three types of basic nursing education programs perform similarly. It therefore, would seem more realistic and desirable to have the initial preparation for the scope of practice now called registered nursing provided by ADN, and diploma programs. The BSN program perhaps should be restructured, providing a well articulated opportunity for RN's to expand their knowledge in breadth or depth. The RN pursuing a baccalaureate degree would not repeat basic nursing preparation but begin to concentrate his or her efforts into majors within undergraduate preparation for nursing such as administration, education, critical care, community nursing, school nursing, industrial nursing, clinical specialty nursing, and others. By building on what appears from the research to be an already solid base of nursing knowledge and skills possessed by the ADN and diploma graduate, and not repeating much of what the individual has already achieved, incentives for pursuing further education would likely be enhanced. Such a system would capitalize on the ability of the ADN and diploma programs that are more geographically available to prepare quality registered nurses. With the baccalaureate program structured to provide sound, meaningful nursing specialties or majors, beyond the RN level, new incentives would become available encouraging greater numbers of ADN and diploma nurses to continue their education. It may be realistic that the BSN program should no longer prepare entry level RN's but rather should concentrate on these upper division specialties, enhancing a well planned, articulated career ladder concept in the preparation of nurses.

RECOMMENDATIONS

1. All groups of nurses must learn to work cooperatively to resolve the entry issue to the benefit of the patient and the health care delivery system as

well as themselves.

2. One or more pilot projects should be established in cooperation with the Iowa Board of Nursing, the Iowa Legislature and the many nursing organizations to test and refine an articulated nursing education system with the entry level RN being prepared in ADN and diploma programs and Baccalaureate programs providing majors or specialties at the upper division level rather than entry level RN's.
3. Additional well controlled studies be conducted comparing the actual, not perceived, differences in the performance and characteristics of RN's prepared in the three current types of basic nursing education programs. It may be desirable, even necessary, to go outside of nursing and have non-nursing researchers, job analysts and other similar individuals design and conduct such research, incorporating a team of nurse advisors.
4. Well planned studies be conducted that would delineate the overall economic impact on the state, on individuals seeking education to become registered nurses, and on all segments of the health care industry that would result from implementation of the entry into nursing proposal.
5. New means of cooperative planning between nursing education and nursing service be found to ensure that nursing education programs prepare nurses who meet the needs of nursing services in the health care delivery system.
6. The licensed practical nurse and related one year education program be continued as they now exist and be included in the well planned, articulated program.

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